



200000091

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME;

Asgrow Seed Company TTC

THERE'S, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE AGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PROPAGATION, OR STOCKING IT FOR ANY OF THE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT A BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'AG2001'

In Testimon Marcrof. I have hereunto set my hand and caused the seal of the Plant Daviety Arotection Office to be affixed at the City of Washington, D.C. this eighth day of May, in the year of our Lord two thousand one.

Clark fort

Acting Commissioner Plant Variety Protection Office Agricultural Marketing Service Wengerson

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

The following state mems are made in accordance with the Phyacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

Application is required in order to determine it a plant variety protection certificate is to be issued (7.11.5.C. 2421). Information is half confidential and protection or provided (7.11.5.C. 2421).

(Instructions and information collection burden statement	on reverse)		miormation is nelo comidential until	THE PARTY OF THE P		
1 NAME OF OWNER Asgrow Seed Company LLC			2 TEMPORARY DESIGNATION EXPERIMENTAL NAME AGW18703	OR 3 VARIETY NAME AG2001		
4 ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code, and County	rv)		5 TELEPHONE (include area co	de) FOR OFFICIAL USE ONLY		
634 East Lincoln Way			515-232-7170	PVPO NUMBER		
Ames IA 50010		1		2 0000000001		
	.,:		5 FAX (include area code)			
		*	515-956-6905	FILING DATE		
7 IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF	P & BICODODA			12/9/1999		
ORGANIZATION (corporation, partnership, association, etc.)	8 IF INCORPORATE STATE OF INCOR	D. GIVE PORATION	9 DATE OF INCORPORATION	12/1/1/19		
Corporation	Delaware		March 22, 1968			
10 NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THE	S APPLICATION (First p	erson listed will re-	ceive all papers)	FILING AND EXAMINATION		
D	at the second of the	4 N	and the second s	FEES:		
Donald Steffen Asgrow Seed Company LLC				E : 2 450.		
634 East Lincoln Way	100	er en samme de la companya de la co La companya de la co		R DATE /2/9/1999		
Ames IA 50010	Notice of the second	The second second		C E CERTIFICATION FEE:		
		at the No		1, 22000		
				5 101		
				DATE 4 23/01		
11 TELEPHONE (Include area code) 12 FAX (Include area code)	13 E_MA			14 CROP KIND (Common Name)		
515–956–3002 515–956–6905	donald		en@monsanto.com	Soybean		
15 GENUS AND SPECIES NAME OF CROP						
Glycine max		LY NAME (Botanic	3 0	17 IS THE VARIETY A FIRST GENERATION HYBRID?		
•	Leg	uminosae 		☐ YES 🖺 NO		
18 CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow reverse)	instructions on	19. DOES THE (OWNER SPECIFY THAT SEED OF SEED? See Section 63(a) of the	THIS VARIETY BE SOLD AS A CLASS OF		
a. 🕱 Exhibit A. Origin and Breeding History of the Variety		_	YES (If "yes", answer dems 20	NO (If "no," go to item 22)		
b Exhibit 8. Statement of Distinctness		7. 6	and 21 below)			
c.		20. DOES THE OF GENERA	DWNER SPECIFY THAT SEED OF NTIONS?	THIS VARIETY BE LIMITED AS TO NUMBER		
e. X Exhibit E. Statement of the Basis of the Owner's Ownership			res	□ NO		
 Voucher Sample (2,500 viable untreated seeds or, for tuber propaga ventication that tissue culture will be deposited and maintained in an 	led vaneties, approved public	21 IF YES TO	ITEM 20 WHICH CLASSES OF PL	RODUCTION BEYOND BREEDER SEED?		
G Fill Films and Examplation Fee (57.450) made reported to "Transverse of		FOUNDATION REGISTERED CERTIFIED				
States" (Mail to the Hant Vanety Protection Office)			and the second s			
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRI FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR US OTHER COUNTRIES?	ID PRODUCED ED IN THE U. S. OR	23. IS THE VAR PROPERTY	ETY OR ANY COMPONENT OF T RIGHT (PLANT BREEDER'S RIGH	HE VARIETY PROTECTED BY INTELLECTUAL IT OR PATENTI?		
YES WOULD THE DATE OF THE DATE		_	YES	NO		
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, T FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space and	RANSFER, OR USE cated on reverse.)	IF YES, PLE REFERENCI	ASE GIVE COUNTRY, DATE OF FI E NUMBER. <i>(Please use space mo</i>	ILING OR ISSUANCE AND ASSIGNED		
24 The owners declare that a viable sample of basic seed of the variety will be furn for a tuber propagated variety a tissue culture will be deposited in a public repo	rished with application ar	nd will be replenes	ned upon request in accordance will	n such regulations as may be applicable, or		
The undersioned cameris) is fare) the corner of this security reconstruct or take		M FIND CONTENTIONS OF RE	e corricate,	and the second of the second o		
and is entitled to protection under the provisions of Section 42 of the Plant Vario Owner(s) is(are) informed that false representation herein can jeopardize prote	ory e rostocame rest	the second of		त्र के प्राप्त कर के प्राप्त कर के किया के प्राप्त कर के प्राप्त कर के प्राप्त कर के प्राप्त कर के प्राप्त कर विकास के प्राप्त कर किया कर के प्राप्त क		
SIGNATURE OF JOWNER	, warm no probable	SIGNATURE OF	CWAICD			
La Staff		SIGNATURE OF		entropy of the entropy of the property and the second of t		
NAME (Please print or type)		NAME (Please p	ount or type)			
			· · · · · · · · · · · · · · · · · · ·			
Regulatory Affairs Mgr. 10/		CAPACITY OR	TITLE	DATE		
KEUNISTORW A++~i~- W	15/1999					

EXHIBIT A

ORIGIN AND BREEDING HISTORY OF AG2001

- 1993 Cross YP9312905 was made near Isabela, Puerto Rico. Parentage: A1900(3)*A2012*A3237(3)*40-3-2
- 1993-94 F1 & F2 generations were grown near Isabela, Puerto Rico and advanced using modified pedigree selection.
- 1994 F3 Bulk Populations were grown in Janesville, Wisconsin and single plants pulled.
- F3 derived F4 plants were grown in Janesville, Wisconsin in progeny rows, and row YP931290 5WY2-1425 was selected based on agronomic characteristics.
- F3:5 YP931290 5WY2-1425 was entered in a yield test at 4 locations in the upper Midwest, where it placed 1st of 50 entries.
- 1996-97 Now named AG2001, F3:6 breeder seed was sent to winter nursery for double increase.

AG2001 is uniform and stable within commercially acceptable limits based on trial observations since 1995. As with any other soybean variety, variants can occur for almost any characteristic during the course of repeated sexual reproduction.

EXHIBIT B

Novelty Statement Concerning AG2001 Soybean

To our knowledge, the soybean varieties that closely resemble AG2001 are A1900, AG1901 and A1923

1. Pod wall color	AG2001	- Tan
	A1900	- Brown
	AG1901	- Brown
	A1923	- Tan
2. RR™ gene	AG2001	- Present
(Tolerance to glyphosate herbicide)	A1900	- Absent
	AG1901	- Present
	A1923	- Absent
3. Pubescence color	AG2001	- Tawny
and the second of the second o	A1900	- Tawny
	AG1901	- Tawny
	A1923	- Tawny

Form Approved: OMB NO. 0581-0055

REPRODUCE LOCALLY. Include form number and date on all reproductions

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is extimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

> U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY PLANT VARIETY PROTECTION OFFICE BELTSVILLE, MD 20705

EXHIBIT C (Soybean

OBJECTIVE DESCRIPTION OF VARIETY SOYBEAN (Glycine max (L.) Merr.)

NAME OF	APPLICANT(S)				FOR OFFICIAL USE ONLY
Asgro	w Seed Com	pany LLC			PVPO NUMBER
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code)			VARIETY NAME		
	,,	, , ,			AG2001
1	st Lincoln Way				TEMPORARY DESIGNATION
Ames IA 50010					AGW18703
a zero in the minimum of standard may	first box (e.g. $\Box\Box$	☐ or ☐☐) when a rative data should be nine plant colors;	number is either 99 o determined from va lesignate system use	r less 9 or less respe wieties entered in the ed:	cribes the varietal character of this variety in the boxes below. Place ctively. Data for quantitative plant characters should be based on a same trial. Royal Horticultural Society or any recognized colorplication.
A. MOR	PHOLOGY				
Seed Shap	e:				
2		Spherical		2 = Spheric	al Flattened
		W, L/T, and T/W	ratios - <1.2)	(L/W ratio	>1.2; L/T ratio = <1.2)
		Elongate		_	te-Flattened
		T ratio > 1.2; T/W	=<1.2)	(L/T ratio >	1.2; T/W >1.2)
Seed Coat	t Color:				
1	1= Yellow	2= Green	3= Brown	4= Black	5= Other
					(Please Specify)
Seed Coat	Luster:				
1	1= Duli	2= Shiny			
Seed Size:					
1 8	grams/100 s	eeds			
Hilum Col	or:				
6	1= Buff	2= Yellow	3= Brown	4= Gray	5= Imperfect Black
······································	6= Black	7= Other (Pl	ease Specify)	· · · · · · · · · · · · · · · · · · ·	
Cotyledon	Color:				
1	1 = Vellow	2 = Green			

A. MORPHOLOGY Continue

	`	,				201	00	00	U9	
Seed Prote	ein Peroxidase Acti	ivity:								
	$1 = L_{0W}$	2 = High								
Hypocotyl	Color:									
3	1 = Green Evans' or 'Davis'	2 = Green with B Bands below Coty Woodworth'or'T	yledon	3 = Light Purple below Cotyledons 'Beeson'or'Pickett	unifoliat	k Purpleextendin e leaves (Hodgs or'Hampton266	on',			
Leaf Shape	e:									
3	1 = Lanceolate	2 = Oval 3	s = Ova	te 4 = Other	(Please Specify)				
Flower Co	lor:									
2	1 = White	2 = Purple 3	s = Whi	te with a Purple Th	roat					
Pod Color:										
1	1 = Tan	2 = Brown	3 = Bla	nck						
Pubescence	Color:									
2	1 = Gray	2 = Brown (Tawn	y)	3 = Light Tawny						
Plant Habit	t :									
3	1= Determinate	2= Semi-Determin	ate .	3= Indeterminate	4 = Inter	mediate				
B. DISEA	SE REACTIONS	0 = Not 1	Tested	1 = Susceptible 2	= Resistant	3 = Tolerant				
Bacterial				· -						
0	Bacterial Pustule	e (Xanthomonas ca	mpestri	is pv. <i>glycine</i> s (Naka	no) Dye)					
0	Bacterial Blight	(Pseudomonas syri	ngae pv	v. glycinea (Coerper) Young, Dye	&Wilkie)				
0	Wildfire Blight (Pseudomonas syrin	gae pv.	tabaci (Wolf & Fost	er) Young, Dy	e &Wilkie)				
Fungal										
0	Brown Spot (Sep	toria glycines Hem	mi)							
·	Frogeye Leafspot	(Cercospora sojina	2)	·						
0	race 1	0 ra	ce 2	0	race 3	0 1	ace 4			
0	race 5	0 ra	ce 6	0	Other (Pleas	se Specify)			_	
0	Target Spot (Cor	ynespora cassiicola	ı (Berk.	. & Curt.)Wei)						
0	Downy Mildow (Peronospora trifolio		I I OT	\					

В.	DISEASE REAC	CTIONS (Continued)	0 = Not Tested 1 = Susceptible 2	= Resistant	091
0	Powdery	Mildew (<i>Microsphaera dif</i>	fusa Cke. & Pk.)		
0	Brown S	item Rot (<i>Phialophora greg</i>	ata (Allington & Chamberlain) W.	Gams.)	
0	Stem Ca	nker (<i>Diaporthe phaseolori</i>	um (Cke. & Ell.)Sacc. var. caulivora	Athow & Caldwell)	
0	Pod and	Stem Blight (Diaporthe pho	aseolorum (Cke. & Ell.)Sacc. var. so	jae (Lehman) Wehm.)	
0	Purple S	eed Stain (<i>Cercospora kiku</i>	chii (T. Matsu. & Tomoyasu) Garde	ener)	
0	Rhizocto	nia Root rot (<i>Rhizoctonia s</i>	olani Kuhn)		
Phyto	ophthora Rot (<i>Phyt</i>	ophthora megasperma Drec	chs. f. sp. <i>glycinea</i> (Kuan & Erwin))		
2	race 1	2 race 8	2 race 15	2 race 22	
2	race 2	2 race 9	1 race 16	1 race 23	
2	race 3	2 race 10	2 race 17	2 race 24	
2	race 4	2 race 11	2 race 18	1 race 25	
2	race 5	1 race 12	1 race 19	0 race 26	
2	race 6	2 race 13	1 race 20	0 race 27	
2	race 7	2 race 14	1 race 21	Other (Pleaserify)	ase
0	Bud Bligl	nt (Tobacco Ringspot Viru	s)	-1 JV/	
0	Yellow M	losaic (Bean Yellow Mosai	c Virus)		
0	Cowpea M	Mosaic (Cowpea Chlorotic \	Virus)		
0	Pod Mott	le (Bean Pod Mottle Virus))		
0	Seed Mot	tle (Soybean Mosaic Virus)		
Nema	tode				
Soybe	an Cyst Nematode	(Heterodera glycines Ichine	ohe)		
0	race 1	1 race 3	0 race 6	1 race 14 (for	rmer r. 4)
0	race 2	0 race 5	0 race 9	Other (Plea	
0	Lance Nei	natode (<i>Hoplolaimus color</i>	mbus Sher)	Specify)	
0	Southern 1	Root Knot Nematode (Mel	oidogyne incognita (Kofoid & Whit	e)Chitwood)	
0	Northern 1	Root Knot Nematode <i>(Mel</i>	oidogyne hapla Chitwood)		

B. DISEA	SE DEACONOMICA				20000 3 = Tolerant	0 0 a
0	SE REACTIONS (Continued) Peanut Root Knot Nematode (Me				3 = Tolerant	
0	Reniform Nematode (Rotylenchul			•		
0	Javanese Nematode (Meloidogyne					
	Other Nematode (Please Specify)					
C. PHYSIC	DLOGICAL RESPONSES				2 - 70-1	
	Iron Chlorosis on Calcareous Soil		1 = Susceptible	2 = Resistant	3 = Tolerant	
0	Phosphorus			•		
0	Boron					
0	Aluminum					
0	Salt					
0	Drought					
	Other (Please Specify)					
	Other Wieuse Specify)					
D. INSECT	REACTIONS	0 = Not Tested	1 = Susceptible	2 = Resistant	3 = Tolerant	
0	Mexican Bean Beetle (Epilachna v	<i>arivestis</i> Mulsant)			
0	Potato Leaf Hopper (Empoasca fai	bae (Harris))				
	Other (Please Specify)					
E. HERBIC	IDE REACTIONS	0 = Not Tested	1 = Susceptible	2 = Resistant		
2	Metribuzin					
0	Bentazone					
1	Sulfonylurea					
2	Glyphosate					
1	Glufosinate					
0	Pendimethalin					
	Other (Please Specify)		<u></u>			
F. TRANSG	ENIC COMPOSITION					
Has the develop	ment of the Subject Variety include	ed the insertion o	r removal of gene	etic material?	<u> </u>	
If yes, please co	mplete the following informationeq	uests*. Use addi	tional pages if ne	cessary.	Yes X No)
00 B 400 - 1					· · · · · · · · · · · · · · · · · · ·	

F. TRANSGENIC COMPOSITION(Continued)

200000091

- 1. Please state the vector's name:
- 2. Please state the vector components:
- 3. Please describe the genetic material successfully transferred into the Subject Variety:
- 4. Please describe the insertion protocol:
- * A literature citation(s) explaining the four information requests above may be an acceptable alternative to completion of the "Transgenic Composition" portion of this form.

G. BIOCHEMICAL MARKERS

Please describe any biochemical information here which you believe will be helpful in further describing the Subject Variety (e.g. Sim Sequence Repeats, Random Fragment LengthPolymorphisms, Isozymic Characterization). Use additional pages if necessary.

H. COMMENTS

EXHIBIT D

Additional Description of AG2001 Soybean

AG2001 is a late maturity group I variety with resistance to Roundup tm herbicide. It has very high yield potential. It has superior yields to lines of similar maturity and has excellent agronomic characteristics, including lodging resistance. It has a major gene for Phytophthora resistance, Rps1k, conferring resistance to most races of Phytophthora. AG2001 would be grown in the later Group I growing areas of the upper corn belt, including Michigan, Minnesota, Northern Iowa and Wisconsin. It appears to be slightly more adapted to the eastern area of its region, including Michigan and Wisconsin. It is only average in attractiveness.

EXHIBIT E

Statement of Basis of Applicant Ownership

AG2001 was originated and developed by Dr. Andrew Nickell, an Asgrow soybean breeder. By agreement with Asgrow Seed Company LLC, all rights to any invention, discovery or development made by employees are assigned to the company. No rights of such invention, discovery or development are returned to the employee.

AGRICULTURAL MARKETING SERVICE	The following statements are made in 1974 (5 U.S.C. 552a) and the Paperwo	
EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP	Application is required in order to decertificate is to be issued (7 U.S.C. 2 until certificate is issued (7 U.S.C. 2426	421). Information is held confidential
1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Asgrow Seed Company LLC	AGW18703	AG2001
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)	5. TELEPHONE (include area code)	6. FAX (include area code)
634 E. Lincoln Way Ames IA 50010	515-232-7170	515-232-6905
Ames 1A 50010	7. PVPO NUMBER	
-	20000	009/
8. Does the applicant own all rights to the variety? Mark an "X" in approp	niate block. If no, please explain.	YX YES NO
 Is the applicant (individual or company) a U.S. national or U.S. based of If no, give name of country 	company?	XX YES NO
10. Is the applicant the original owner?	NO If no, please answer one of the fo	ollowing:
a. If original rights to variety were owned by individual(s), is (are) the o	riginal owner(s) a U.S. national(s)?	
, TES [NO If no, give name of country	
b. If original rights to variety were owned by a company(ies), is(are) the	e original owner(s) a U.S. based company	<i>?</i>
YES 1	NO If no, give name of country	
11. Additional explanation on ownership (if needed, use reverse for extra s	space):	
υ * » (-	€ (

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

- 1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- 2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- 3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

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